

REMARKS

This paper is submitted in reply to the Office Action dated December 20, 2004, within the three-month period for response. Reconsideration and allowance of all pending claims are respectfully requested.

In the subject Office Action, claims 18, 33 and 93 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Moreover, claims 1-11, 13-16, 18-24, 26-29 and 31-32 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,192,354 to Bigus et al. Furthermore, claims 12 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bigus et al. in view of Kopelman "Accelerated engineering: the 3 secrets to just-in-time product development (JITPD)" (27-29 Sept. 1994), claims 17, 30, 33 and 93 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bigus et al. in view of Stidolph "Evolutionary Design of Complex Software (EDCS) Demonstration Days 1999" (January 2000), and claim 57 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bigus et al. in view of U.S. Patent No. 6,088,689 to Kohn et al.

Applicants respectfully traverse the Examiner's rejections to the extent that they are maintained. Applicants have amended claims 1, 18, 31, 33 and 93. Applicants respectfully submit that no new matter is being added by the above amendments, as the amendments are fully supported in the specification, drawings and claims as originally filed.

As an initial matter, Applicants wish to thank the Examiner for the consideration extended in the telephonic interview conducted between the Examiner and Applicants' representative on February 7, 2005. In the interview, proposed amendments to the claims to address the §101 and §102(e) rejections were discussed.

Now turning to the subject Office Action, and more particularly to the §101 rejections of claims 18, 33, and 93, the Examiner will note that claim 18 has been amended to recite that the step of executing a second product support intelligent agent is

Page 11 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\hm\201\Amendment and Response to 12-20-04 OA.wpd

"computer-implemented". Likewise, claim 33 has been amended to recite that at least one of the collecting, identifying, creating and distributing steps is "computer-implemented," and claim 93 has been amended to recite that the claimed method is "computer-implemented." As such, each of these claims now recites at least one step that is expressly implemented by a computer, thus addressing the Examiner's concerns with respect to statutory subject matter. Reconsideration and withdrawal of the §101 rejections of claims 18, 33 and 93 are therefore respectfully requested.

Next, with respect to the art-based rejections, and in particular, to the rejection of independent claim 1, this claim has been amended to clarify that at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product.

As Applicants have previously argued, and as Applicants reiterated in the telephonic interview, Applicants' claims, and in particular claim 1, specifically focus on a particular application of intelligent agent technology in connection with providing product support to a customer's computer-related product. To further clarify this specific application, Applicants have amended claim 1 to more clearly characterize one type of possible product support operation performed by one of the intelligent agents as an operation that either identifies or remedies an undesirable operational condition associated with a computer-related product. Support for this amendment may be found, for example, at page 6, lines 20-22 of the application.

As discussed, for example, at page 20, lines 11-13 of the application, an undesirable operational condition may include "various errors, bugs or other technical problems that prevent the correct operation of the system, or otherwise cause system crashes, incorrect data, or other hardware or software failures." Thus, claim 1 facilitates the correction of such an undesirable operational condition through identifying and/or

Page 12 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\bnt\201\Amendment and Response to 12-20-04 OA.wpd

remedying a particular non-optimal performance-related attribute of a system that incorporates a computer-related product.

Also of note, claim 1 requires the dispatch of an intelligent agent by a program resident on a product support computer to a customer computer that utilizes the computer-related product. Claim 1 is therefore not simply directed to the dispatch of intelligent agents to agent platforms in the abstract, but is instead specifically focused on the dispatch of an intelligent agent specifically for the purpose of providing product support to a customer.

Bigus et al., on the other hand, does not specifically disclose the performance of product support operations by product support intelligent agents, or the specific execution and dispatch of product support intelligent agents respectively on a product support computer and a customer computer. Nor does Bigus et al. disclose product support operations that either identify or remedy undesirable operational conditions associated with computer-related products.

Bigus et al. does disclose the concept of dispatching intelligent agents with varying degrees of domain knowledge. However, Bigus et al. fails to disclose any specific application of this functionality in the field of product support, or specifically for the purpose of identifying or remedying undesirable operational conditions. Bigus et al. also fails to disclose the claimed distribution of functionality between a product support computer and a customer computer. Given that §102 requires that Bigus et al. specifically disclose and every limitation of claim 1, Applicants respectfully submit that the lack of disclosure in Bigus et al. directed to providing product support, identifying and/or remedying undesirable operational conditions associated with a computer-related product, and using a product support computer to dispatch an intelligent agent to a customer computer renders claim 1 novel over Bigus et al. Withdrawal of the §102 rejection of claim 1 is therefore respectfully requested.

Page 13 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\ibm\201\Amendment and Response to 12-20-04 OA.wpd

The Examiner argues on page 26 of the subject Office Action that no explicit definition of "product support" is provided in the application, and that in this regard, the claims were given a broadest reasonable interpretation that allegedly was met by Bigus et al. As noted above, however, Applicants have now amended claim 1 to recite specific examples of product support operations that are not disclosed in Bigus et al. Furthermore, Applicants also note that the Examiner's interpretation of the term "product support" is not even consistent with the ordinary meaning of the term in this art area. The definition of "technical support" in the Computer Desktop Encyclopedia (found online at Answers.com) is "[t]echnical assistance from a hardware manufacturer, software publisher, internal help desk, educational institution or third-party support company." While Applicants have chosen to use the term "product support" rather than "technical support", Applicants have also recited in the claim that the "product" being supported is a "computer-related" product. Applicants respectfully submit that, when taken together, these terms require that the "product support" operations recited in the claim are in the nature of providing technical assistance for a computer-related product. Accordingly, Applicants submit that one of ordinary skill in the art would not interpret the term as broadly as has the Examiner in the rejection of claim 1.

In addition, the Examiner apparently argues that Bigus et al. could be used in product support applications. However, the fact that a certain reference *could* be used in a particular application is not sufficient for the purposes of §102 when the reference does not expressly or inherently disclose that particular application. Whether a reference could be used in a particular application may be relevant from the standpoint of interpreting the claims of that reference, but is not relevant to what that reference teaches one of ordinary skill in the art.

Applicants also respectfully submit that the Examiner has failed to provide any objective evidence of a motivation in the art to modify or adapt Bigus et al. to incorporate the claimed functionality within the specific area of providing product support to a

Page 14 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\bin\201\Amendment and Response to 12-20-04 OA.wpd

customer's computer-related product. As such, claim 1 is also non-obvious over Bigus et al. and the other prior art of record. Reconsideration and allowance of claim 1, as well as of claims 2-17 which depend therefrom, are therefore respectfully requested.

Next, with respect to independent claims 18 and 31, as with claim 1, these claims have been amended in a similar manner to claim 1, and now recite that at least one of the first and second product support intelligent agents is configured to perform at least one of a product support operation that identifies an undesirable operational condition associated with the computer-related product and a product support operation that remedies an undesirable operational condition associated with the computer-related product.

Moreover, similar to claim 1, each of these claims recites, to varying extents, the concepts of providing product support for a customer's computer-related product and using a product support computer to dispatch an intelligent agent to a customer computer. As noted above with respect to claim 1, Bigus et al. does not disclose these particular features, and as such, the Examiner has failed to establish anticipation of these claims, and the rejections thereof should be withdrawn. Furthermore, the Examiner has provided no evidence of any motivation in the art to modify Bigus et al. to practice the features recited in these claims. Accordingly, Applicants respectfully submit that claims 18 and 31 are novel and non-obvious over Bigus et al. and the other prior art of record. Reconsideration and allowance of these claims, as well as of claims 19-30 and 32 which depend therefrom, are therefore respectfully requested.

Next, with respect to independent claim 33, this claim recites in part the collection of operational data from a plurality of customer computers that utilize a computer-related product during the operation of the plurality of customer computers, the identification of an undesirable operational condition associated with the computer-related product from the collected operational data, the creation of a product support intelligent agent configured to remedy the undesirable operational condition, and the distribution of the product support intelligent agent to at least first and second customer computers from the

Page 15 of 20
Serial No. 10021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\ibm\201\Amendment and Response to 12-20-04 OA.wp1

plurality of customer computers to remedy the undesirable operational condition in the first and second customer computers.

In addition, the Examiner will note that claim 33 has been amended to clarify that the identified undesirable operational condition "includes a technical problem resulting in at least one of incorrect and non-optimal operation of the at least one customer computer." Support for this amendment may be found, for example, at page 20, lines 11-21 of the application.

In rejecting claim 33, the Examiner relies on Bigus et al. and Stidolph. As noted above, Bigus et al. is not explicitly directed to product support, nor does the reference suggest any particular application in connection with product support. Moreover, it should be noted that, similar to claim 1, claim 33 recites the identification of an undesirable operational condition and the creation and distribution of an intelligent agent to remedy that undesirable operational condition. Claim 33 also specifically recites the concepts of collecting operational data from multiple customer computers and then distributing a product support intelligent agent to multiple customer computers to remedy an undesirable operational condition. Bigus et al. is entirely silent with respect to the concept of distributing agents to different customer computers in a product support context, and for the purpose of remedying an undesirable operational condition. As Bigus et al. doesn't address undesirable operational conditions, Bigus et al. likewise cannot be interpreted to disclose or suggest undesirable operational conditions that include "a technical problem resulting in at least one of incorrect and non-optimal operation of at least one customer computer," as is now recited in claim 33.

Moreover, it should be noted that the cited passage in Stidolph, directed to distributed software engineering, similarly does not appear to be directed to providing product support (*i.e.*, technical assistance) for a computer-related product. The cited passage in Stidolph merely discloses "a distributed, agent-based framework supporting software artifact deployment over a wide-area network." Nothing in this passage

Page 16 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&B IBM/201
K:\ibm\201\Amendment and Response to 12-20-04 OA.wpd

discloses or suggests either the concept of collecting operational data from multiple customer computers, or distributing agents to multiple customer computers to remedy an undesirable operational condition. Nor is there any disclosure in Stidolph that appears to suggest addressing operational conditions that include "a technical problem resulting in at least one of incorrect and non-optimal operation of at least one customer computer," as is now recited in claim 33. Indeed, given the passage is associated with "software engineering," it appears the passage refers to creating software, rather than providing support for already-existing software. As such, Applicants respectfully submit that Stidolph adds nothing to the Examiner's rejection.

In short, the combination of Bigus et al. and Stidolph does not suggest the provision of product support in the specific manner recited in claim 33. Moreover, as discussed above, the concepts of "product support" and "undesirable operational conditions" both as used in the application and as would be recognized by one of ordinary skill in the art, refer to a particular endeavor whereby technical assistance is provided to address technical problems associated with one or more customers' computer-related products. As such, Applicants respectfully submit that one of ordinary skill in the art would not be motivated to modify Bigus et al. to practice the features recited in claim 33 upon a reading of either reference, and claim 33 is therefore non-obvious over these cited references. Reconsideration and allowance of claim 33 are therefore respectfully requested.

Next, with respect to independent claim 57, as with claim 33, this claim recites the collection of operational data from a plurality of customer computers, as well as the identification of an undesirable operational condition associated with a computer-related product. Claim 57 also recites the analysis of the operational data from the plurality of customer computers using at least one intelligent agent.

In rejecting claim 57, the Examiner now relies on the combination of Bigus et al. with the new reference to Kohn et al. The Examiner admits that Bigus et al. does not

Page 17 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\Vint\201\Amendment and Response to 12-20-04 OA.wpd

disclose the collection of operational data or the analysis of the operational data from the plurality of customer computers using an intelligent agent. Instead, the Examiner relies on Kohn et al., and in particular, the passages at col. 10 and Figs. 1A and 7 to allegedly disclose these features.

It appears, however, that the Examiner is completely reading out of claim 57 any feature related to providing product support for a computer-related product. Claim 57 recites the collection of operational data from multiple customer computers during the operation of those computers, coupled with the analysis of such data using an intelligent agent, and the identification of an undesirable operational condition associated with a computer-related product as a result of the analysis. Kohn et al., however, appears to have no appreciation for any of these concepts. The fact that Kohn et al. discloses that an agent can perform analysis falls far short of disclosing or suggesting Applicants claimed mechanism for analyzing operational data collected from multiple customer computers to identify an undesirable operational condition. As such, the combination proposed by the Examiner falls short of suggesting each and every limitation of claim 57, so the rejection of claim 57 should be withdrawn. Reconsideration and allowance of the claim are therefore respectfully requested.

Next, with respect to independent claim 93, this claim recites in part a method of providing product support for a computer-related product that includes the execution of first and second intelligent agents to respectively perform first and second tasks associated with remedying an undesirable operational condition associated with a customer computer that utilizes the computer-related product. The claim additionally recites that the first intelligent agent is provided by a first vendor that supplies a first component associated with the computer-related product, while the second intelligent agent is provided by a second vendor that supplies a second component associated with the computer-related product.

Page 18 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\lrm\201\Amendment and Response to 12-20-04 OA.wpd

As such, claim 93 recites an environment where multiple intelligent agents cooperatively operate to address an undesirable operational condition, where the intelligent agents are provided by different vendors that supply different components associated with the same computer-related product.

The Examiner admits that Bigus et al. does not teach the use of intelligent agents provided by different vendors, and relies instead on page 108 of Stidolph, specifically the passage detailing WebDAV. The cited passage, however, merely references the use of a standard HTTP-like protocol to provide the collaborative use of distributed files. Beyond a mention that multiple vendors are developing the protocol, there is no disclosure or suggestion in Stidolph of providing product support, much less doing so using multiple intelligent agents provided by different vendors to perform multiple tasks associated with remedying an undesirable operational condition.

Moreover, as noted above, Bigus et al. does not disclose or suggest performing tasks with intelligent agents to remedy undesirable operational conditions in computer-related products. Stidolph, likewise, discloses only the collaborative development of a protocol, and is utterly silent with respect to any functionality for remedying undesirable operational conditions in computer-related products. Moreover, neither reference has any appreciation for the concept of executing intelligent agents on a customer computer to remedy undesirable operational conditions.

Given that neither Bigus et al. nor Stidolph disclose or suggest performing product support operations via intelligent agents, much less doing so in the particular manner recited in claim 93, Applicants respectfully submit that the combination proposed by the Examiner fails to suggest each and every feature of the claim. Applicants therefore respectfully request reconsideration and allowance of claim 93.

As a final matter, Applicants continue to traverse the Examiner's rejections of the dependent claims, as the Examiner has merely presented conclusory arguments that do not specifically address the specific language in these various claims. Nonetheless, in

Page 19 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\ibm\201\Amendment and Response to 12-20-04 OA.wpd

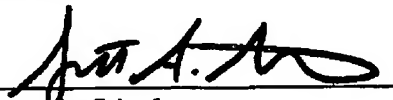
view of the patentability of the independent claims, the dependent claims will not be further addressed herein.

In summary, Applicants respectfully submit that all pending claims are novel and non-obvious over the prior art of record. Reconsideration and allowance of all pending claims are therefore respectfully requested. If the Examiner has any questions regarding the foregoing, or which might otherwise further this case onto allowance, the Examiner may contact the undersigned at (513) 241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

10 FEB 2005

Date


Scott A. Stinebruner
Reg. No. 38,323
WOOD, HERRON & EVANS, L.L.P.
2700 Carew Tower
441 Vine Street
Cincinnati, Ohio 45202
Telephone: (513) 241-2324
Facsimile: (513) 241-6234

Page 20 of 20
Serial No. 10/021,203
Amendment and Response dated February 10, 2005
Reply to Office Action of December 20, 2004
IBM Docket ROC920010146US1
WH&E IBM/201
K:\ibm\201\Amendment and Response to 12-20-04 OA.wpd